Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1. (Canceled)

Claim 2. (Currently Amended) ~~**The package of Claim 1 wherein the**~~ **A semiconductor package comprising:**

a packaging substrate;

a semiconductor die mounted with the substrate;

a heat spreader; and

a multi-layer heat transfer element **arranged between the semiconductor die and the heat spreader to enable thermal communication between the die and the heat spreader wherein the multi-layer heat transfer element** includes:

a core spacer element having a top surface and a bottom surface;

a first layer of thermally conductive reflowable material formed on the top surface; and

a second layer of thermally conductive reflowable material formed on the bottom surface.

Claim 3. (Original) The package of Claim 2 wherein the die is attached to the second layer by a reflow process and wherein the heat spreader is attached to the first layer by the reflow process.

Claim 4. (Original) The package of Claim 2 wherein the core spacer element is comprised of conducting materials.

Claim 5. (Original) The package of Claim 2 wherein the core spacer element is comprised of metal.

Claim 6. (Original) The package of Claim 2 wherein the core spacer element is comprised of layers of metal.

Claim 7. (Original) The package of Claim 2 wherein the core spacer element includes vias that penetrate through the core spacer element.

Claim 8. (Original) The package of Claim 2 wherein the core spacer element includes dimples formed therein.

Claim 9. (Original) The package of Claim 2 wherein the core spacer element is comprised of a conducting resin material.

Claim 10. (Original) The package of Claim 2 wherein the first layer and the second layer each comprise solder materials.

Claim 11. (Original) The package of Claim 10 wherein the semiconductor die is mounted to the packaging substrate using a plurality of solder bumps;

wherein the packaging substrate includes a stiffener element that is mounted between the heat spreader and the substrate.

Claim 12. (Original) The package of Claim 2 wherein the first layer is formed of a solder material that has good adhesion to a material comprising a surface of the heat spreader; and

wherein the second layer is formed of a solder material that has good adhesion to a material comprising a top surface of the die.

Claim 13. (Original) The package of Claim 2 wherein the core spacer element comprises a thermally non-conductive material and wherein the core spacer element includes a plurality of vias that penetrate through the core spacer element;

wherein reflowable material of at least one of the first layer and the second layer fills at least a portion of the vias so that said first layer and the second layer are in physical contact with each other, thereby establishing thermal communication between the die and the heat spreader.

Claim 14. (Original) The package of Claim 2 wherein a backside of the packaging substrate has a plurality of solder balls configured for attaching and electrically connecting the package with a circuit board; and

wherein a reflow process is used to attach the heat spreader to the first layer, to attach the second layer to the die, and to attach the solder balls of the substrate to the circuit board.

Claims 15-28 (Canceled)

Claim 29. (New) A semiconductor package comprising:

a packaging substrate;

a semiconductor die mounted with the substrate;

a heatspreader; and

a multi-layer heat transfer element arranged between the semiconductor die and the heat spreader to enable thermal communication between the die and the heat spreader wherein the multi-layer heat transfer element includes:

a core spacer element having a top surface and a bottom surface;

a first layer of thermally conductive reflowable material formed on the top surface of the core spacer and in contact with the heat spreader; and

a second layer of thermally conductive reflowable material formed on the bottom surface of the core spacer and in contact with the die.

Claim 30. (New) The package of Claim 2 wherein the multi-layer heat transfer element is between about 15 microns to about 250 microns thick.

Claim 31. (New) The package of Claim 30 wherein the first layer of thermally conductive reflowable material is between about 1 micron to about 10 microns thick; and

wherein the second layer of thermally conductive reflowable material is between about 1 micron to about 10 microns thick.

Claim 32. (New) The package of Claim 30 wherein the multi-layer heat transfer element is less than about 30 microns thick.

Claim 33. (New) The package of Claim 29 wherein the multi-layer heat transfer element is between about 15 microns to about 250 microns thick.

Claim 34. (New) The package of Claim 33 wherein the first layer of thermally conductive reflowable material is between about 1 micron to about 10 microns thick; and

wherein the second layer of thermally conductive reflowable material is between about 1 micron to about 10 microns thick.

Claim 35. (New) The package of Claim 33 wherein the multi-layer heat transfer element is less than about 30 microns thick.